

Work Order ID 48486

June 26, 2009 12:45:04 PM



Page 1

Item ID: D2003-039
Revision ID: ~~U/R~~ B
Item Name: Tube Assembly-8J

Accept



Setup Start



Stop



Start Date: 15/07/2009 Start Qty: 6.00
Required Date: 03/08/2009 Req'd Qty: 6.00



Cust Item ID:
Customer:

Reference:

Approvals: Process Plan:
QC:

Date:
Date:

Tooling:
SPC (Y/N):

Date:
Date:

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2003	Rev U/R								

100

0.00



Small Fab

Memo

0.00

Small Fab ✓

Cut as per template D2003-039 (34.00" long)
1- Cut: 34.0" long as per Dwg D2003
Material: M2650-6 Heat sleeve
2- Form tube as per template D2003-039

M-h

09/07/21

6X

110

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

27 801/2/21

46

φ

120

0.00



Small Fab

Memo

0.00

Small Fab

1- Assemble as per Dwg D2003

M-h

09/07/21

6X

Work Order ID 48486

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Page 2

Item ID: D2003-039
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Item Name: Tube Assembly-8J

Accept



Setup Start



Stop



Start Date: 15/07/2009 Start Qty: 6.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 6.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

140

Identify as per dwg & Stock Location: 192

0.00



Packaging

Memo

0.00

Packaging

150

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

CC

φ

9/7/23 Gr. SB

09/07/23

MF 09-07-23

Picklist Print

June 26, 2009 12:45:03 PM

Page 1

Work Order ID: 48486

Parent Item: D2003-039RevU/R

Parent Item Name: Tube Assembly-8J

Comments: Rev:B re-format



Start Date: 15/07/2009

Required Date: 03/08/2009

Start Qty: 6.00

Required Qty: 6.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M304TR0.500W.035 		Purchased	No			100	f	0.0000	17.8945		M111097 (5x)	
304 RD Tube .500 x .035W D2182-045RevC 		Manufactured	No			100	Each	0.0000	6.0000		M111704 (1x) M-L 09/07/21	
Heat Shrink 4.5" Long M2650-6 		Purchased	No			100	f	0.0000	17.8737		B21864B M-L 09/07/21	
Firesleeve-crkl .375IDia AN818-8J 		Purchased	No			100	Each	0.0000	12.0000		M106781 (3x) M-L 09/07/21	
Nut MS20819-8J 		Purchased	No			100	Each	0.0000	12.0000		M112195 (1x) M-L 09/07/21	
Sleeve											M107959 M-L 09/07/21	
											M109370 M-L 09/07/21	

Date: Thursday, 11/06/2009 11:54:41 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : TUBE ASSEMBLY
Job Number : 48486	
Estimate Number : 11920	
P.O. Number :	Part Number : D2003039
This Issue : 11/06/2009 S.O. No. :	Drawing Number : D2003 UNDER REVIEW OK 09.06.11
Prsht Rev. : NC	Project Number : N/A
First Issue : // Type : SMALL /MED FAB	Drawing Revision : B
Previous Run : 38552	Material :
Written By :	Due Date : 19/06/2009 Qty: 6 Um: Each
Checked & Approved By : <u>JUDAS. 06.11</u>	
Comment : Est B 00.01.12 Re-format EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M304TR0500W035	304 RD Tube .500 x .035W
-----	----------------	--------------------------



Comment: Qty.: 2.9750 f(s)/Unit Total : 17.8498 f(s)

304 RD Tube .500 x .035W

Cut as per template D2003-039 (34.00" long)

Material: 1/2" AE x 0.035" wall AISI 304 SS tubing

Cut: 34.0" long as per Dwg D2003

Material: M2650-6 Heat sleeve

Batch: M106781 (5X) M112195 (1X)

Batch: _____

M111097 (5X)
 M111004 (1X)

m-h
 04/07/21

2.0	M26506	Firesleeve-crkl .375IDia
-----	--------	--------------------------



Comment: Qty.: 2.8300 f(s)/Unit Total : 16.9800 f(s)

Firesleeve-crkl .375IDia

M106781 (5X)

M112195 (1X)

m-h
 04/07/21

3.0	MS208198J	Sleeve
-----	-----------	--------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick

Qty Part Number Desc Batch:

2 MS20819-8J Sleeve

M1109370

m-h 04/07/21

4.0	AN8188J	Nut
-----	---------	-----



Comment: Qty.: 2.0000 Each(s)/Unit Total : 12.0000 Each(s)

Pick

Qty Part Number Desc Batch:

2 AN818-8J Nut

M107959

m-h 04/07/21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 11/06/2009 11:54:42 AM
User: Julie Dawson

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 48486

Part Number: D2003039

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D2182045

Heat Shrink 4.5" Long



Comment: Qty.: 1.0000 Each(s)/Unit Total : 6.0000 Each(s)

Heat Shrink 1" x 4.5"

Pick:

Qty Part Number Description Batch
1 D2182-045 Heat shrink

Batch

B21864B m-h 09/07/21

6.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Form tube as per template D2003-039

Assemble as per Dwg D2003

m-h 09/07/21

(6X)

7.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Sort 09/07/21 (46)

8.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

9.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>JA</i>	DRAWN BY <i>JP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>JE</i>	APPROVED <i>JA</i>	DRAWING NO. D2003	REV. B SHEET 1 OF 2
DATE 99.06.08		TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS	
A	90.04.09	NEW ISSUE	
B	99.06.08	UPDATE PER TEMPLATES; ADD P/N'S; 0.025 TUBING NOW 0.035 (TSR1049)	

RELEASED
99.06.08 KE

UNDER REVIEW

06.08.21 CB

some Flat
lengths wrong

P/N	TEMPLATE	HEATSLEEVE LENGTH ¹	CUT LENGTH OF TUBE ²	MS20819-8J SLEEVE	AN818-8J NUT	MS20819-8D SLEEVE	AN818-8D NUT	MS20819-6D SLEEVE	AN818-6D NUT	DESC.	MATERIAL ^{4/6/7}	VENDOR OR SPEC
D2003-001	T2003-001	5.2	6.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-003	T2003-003	7.3	8.12					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-005	T2003-005	9.8	10.62					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-007	T2003-007	20.0	19.63					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-009	T2003-009	12.38	12.44					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-011	T2003-011	33.31	32.38					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-013	T2003-013	12.7	13.54					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-015	T2003-015	17.2	18.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-017	T2003-017	17.0	16.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-019	T2003-019	9.8	10.62			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-021	T2003-021	N/A	2.25			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-023	T2003-023	4.5	5.33			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-025	T2003-025	9.8	10.60			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-027	T2003-027	7.25	7.38			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-029	T2003-029	17.2	18.00			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-700/6
D2003-031	T2003-031	14.6	15.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-033	T2003-033	29.75	29.62	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-035	T2003-035	24.7	27.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-037	T2003-037	24.81	23.38	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-039	T2003-039	34.0	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-041	T2003-041	6.0	5.88	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-043	T2003-043	11.7	10.75	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-045	T2003-045	3.50	2.44	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-047	T2003-047	5.56	5.56	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-049	T2003-049	33.2	34.00	2	2					TUBE ASS'Y	CRES 0.500 OD x 0.035 W	AISI 304
D2003-077	T2003-077	N/A	6.25					1	1	JET	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-101	T2003-101	13.25	13.13					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-103	T2003-103	12.38	12.00					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-105	T2003-105	10.75	10.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-107	T2003-107	12.75	12.25					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-600/6
D2003-109	T2003-109	8.25	8.125			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-600/6
D2003-111	T2003-111	4.75	4.625			2	2			TUBE ASS'Y	6061-T6 0.500 OD x 0.035 W	WW-T-600/6
D2003-116	T2003-116	4.0								HEATSLEEVE	M2650-20 CRINKLE-SOFT	STRATOFLEX
D2003-120	T2003-120	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-14	T2003-14	4.0								HEATSLEEVE	M2650-14 CRINKLE-SOFT	STRATOFLEX
D2003-16	T2003-16	4.0								HEATSLEEVE	M2650-16 CRINKLE-SOFT	STRATOFLEX
D2003-205	T2003-205	9.75	9.60					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
D2003-207	T2003-207	3.75	3.75					2	2	TUBE ASS'Y	6061-T6 0.375 OD x 0.035 W	WW-T-700/6
											RETURN TO ENGINEERING	

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DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2003	REV. B SHEET 2 OF 2
DATE 99.06.08		TITLE 206 CABIN HEATER TUBE ASSEMBLIES NTS	

RELEASED
99.06.04 KE

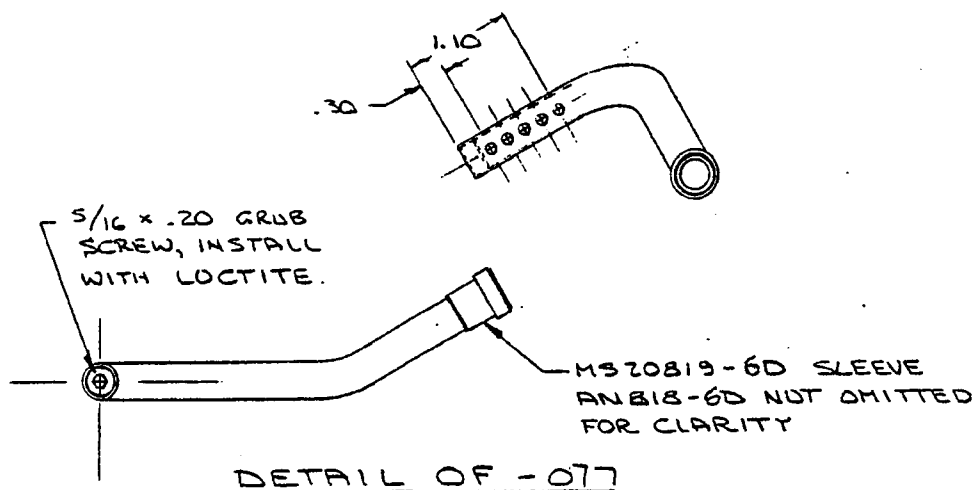
UNDER REVIEW

06.08.21 CB

Some flat lengths
and wrong

Notes:

- (1) USE STRATOFLEX M2650-6 CRINKLE-SOFT HEATSLEEVE.
- (2) TUBING ASSEMBLIES TO BE CUT AND BENT IN ACCORDANCE WITH TEMPLATES.
- (3) TUBES TO BE FLARED 30° TO MATE WITH FITTINGS MADE TO MS33514.
- (4) ENSURE SEAMLESS TUBING IS USED.
- (5) INSTALL HEATSLEEVE OVER ALL TUBES WITH A DESIGNATED LENGTH OF HEATSLEEVE PER THE PARTS LIST.
- (6) 5052 (WW-T-700/4) TUBING MAY BE SUBSTITUTED WHEN 6061 TUBING IS NOT AVAILABLE.
- (7) 0.049 WALL THICKNESS CRES TUBING MAY BE SUBSTITUTED WHEN 0.035 IS NOT AVAILABLE.
- (8) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.



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